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ABSTRACT

Results of the 1985 Recent College Graduates survey, which investigated the employment status, current occupation, salary, and continuation in school of bachelor's degree recipients, are presented. The study group was a nationally representative sample of about 16,000 bachelor's degree recipients. One year after graduation, 64% of arts and sciences majors reported that their job was related to their major, compared to 88% of graduates of professional programs. While 43% of arts and sciences majors felt a degree was not necessary to obtain their job, the major exception was for majors in mathematics, computer science, or physical sciences. Graduates of business and health professions programs were less likely to be enrolled in school 1 year after completing an undergraduate degree, while graduates in biology, social sciences, and psychology were more likely to be enrolled in school. Mathematics, computer science, and physical science graduates earned as much as, or more than, majors in such professional fields as the health professions, business, or public affairs/social services. Information about the survey and data reliability are included, along with a list of the major fields of study and occupations and taxonomy codes. (SW)

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Occupational and Educational Consequences of a Baccalaureate Degree

HE 020 510

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U.S. Department of Education

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Center for Education Statistics

Occupational and Educational Consequences of a Baccalaureate Degree

By: Roslyn A. Korb

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"The purpose of the Center shall be to collect and disseminate statistics and other data related to education in the United States and in other nations. The Center shall . . . collect, collate, and from time to time, report full and complete statistics on the conditions of education in the United States; conduct and publish reports on specialized analyses of the meaning and significance of such statistics; . . . and review and report on education activities in foreign countries."—Section 406 (b) of the General Education Provisions Act, as amended (20 U.S.C. 1221e–1).

March 1987

FOREWORD

This report on the occupational and educational consequences of a baccalaureate degree is one of a series of reports that will result from the 1985 Survey of Recent College Graduates. A report highlighting the results of the study has already been published and two additional reports, one on newly qualified teachers and the other on women and minority graduates, will be issued shortly.

Graduates of our Nation's colleges and universities are an increasingly important segment of our society. They represent a large proportion of the pool of trained manpower at a critical transition period, either entering the labor market or enrolling in graduate and first-professional studies. Determining these transitions from school to work or from undergraduate to postbaccalaureate education and assessing the relative ease with which these transitions are made is a major activity of the Center for Education Statistics. Individuals as diverse as labor market analysts and students participating, or wishing to participate, in higher education need this information to make rational decisions.

In preparing and publishing this report, we recognize that it raises almost as many questions as it answers with respect to occupational and educational outcomes. In future studies of recent college graduates, we hope to be able to address some of these additional questions by examining the process of higher education as well as the outcomes.

Samuel S. Peng
Director,
Postsecondary Education
Statistics Division

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Occupational and Educational Consequences of a Baccalaureate Degree

Summary

Data from the Recent College Graduates survey of 1985 clearly demonstrate the effect that an undergraduate's major field of study has on both employment and enrollment in school 1 year after completing a baccalaureate degree. Those that completed a degree in a professional field or fields that are directly tied to certain occupations tend to find jobs in their field (88 percent of graduates of professional programs reported their job 1 year after graduation was related to their field of study). A large proportion (67 percent) of graduates of professional programs also felt that their job had at least some career potential. Majors in traditional arts and sciences fields that have less of a relationship to specific occupations are less likely than majors in professional fields to find a job related to their field of study (64 percent of arts and sciences program completers reported their job 1 year after graduation was related to their major field). Moreover, among arts and sciences majors, 43 percent felt that a degree was not necessary to obtain their job. The major exception to these findings was for individuals who majored in mathematics, computer science or the physical sciences -- 86 percent of these graduates felt their job was related to their major field, 62 percent felt their job had some career potential, and only 22 percent felt that a degree was not required to obtain their job.

Salaries also tended to be differentiated by field of study - but the relationship of salary to professional or arts and sciences majors was less apparent. Mathematics, computer science and physical science graduates made as much, or more (an average of $21,600 per year), than majors in such professional fields as the health professions ($21,100 per year), business ($19,000 per year), education ($15,300 per year), or public affairs/social services ($15,000 per year). On the other hand, education and public affairs/social services graduates made less, on the average, than graduates in all other major fields except humanities ($14,400 per year).

A graduate's enrollment in school 1 year after completing an undergraduate degree was also somewhat related to completion of a professional or arts and sciences program. Graduates of business and health professions programs were less likely to be enrolled (12 percent and 17 percent enrolled, respectively), and graduates in biology (81 percent enrolled), the social sciences (35 percent enrolled), and psychology (34 percent enrolled) were more likely to be enrolled in school soon after graduation than the typical degree completer (23 percent enrolled).

These findings from the 1985 Recent College Graduates survey (RCG) were based on a nationally representative sample of about 16,000 bachelor's degree recipients from 404 colleges and universities. A questionnaire was mailed to graduates 1 year after completion of a degree, requesting information about employment status, current occupation, salary, and whether or not they continued in school. More details about the survey and reliability of the data are contained in Appendix A. Definitions of terms used in this report are contained in Appendix B. All comparisons cited in the text are significant at the 95 percent or higher confidence level, and pair-wise t-tests were used to test for the statistical significance of observed differences.

Introduction

As students and their families try to cope with the rising costs of a college education and graduating students face the prospect of entering the labor market, major questions arise concerning the value of a 4-year college degree and, concommitantly, which major fields of study are likely to facilitate the transition from school to work. In light of these questions, it is valuable to look at the graduating class of 1983-84 in terms of its overall employment and educational experiences, and it is particularly important to examine how individuals fare in the labor market in terms of detailed undergraduate major fields of study.

Employment

About 86 percent of all 1983-84 baccalaureate degree recipients were employed 1 year after graduation -- about 74 percent were employed full-time and 12 percent were employed part-time; about 3 percent were not working, but were looking for work (table 1). The average annual salary of full-time employed graduates was about $18,300, and about 23 percent were enrolled in school 1 year after completing a baccalaureate degree. Employment rates, unemployment rates, and the average annual salary of recent college graduates compare favorably with statistics for all U.S. labor market participants in 1985. In April 1985, about 78 percent of men and 53 percent of women 20 years of age and over participated in the civilian labor force (89 percent of 1983-84 baccalaureate degree recipients participated) and about 6 percent of men and 7 percent of women were unemployed[1] (3 percent of 1983-84 recent college graduates were unemployed). The average annual salary of all individuals employed on private, non-agricultural payrolls was about $15,000.[2] The reported average annual salary of recent college graduates was $18,300.

While overall statistics for the 1983-84 graduating class were fairly positive, table 1 also indicates that the employment status and average salaries of recent college graduates varied by the field of study that graduates pursued in college. For example, individuals who majored in biology, social sciences, humanities, or psychology were less likely to be employed full-time and more likely to be employed part-time than the typical undergraduate completer, while individuals with majors in business or engineering were more likely to be employed full-time. Table 2 shows how annual average salaries ranked by major field of study.

Enrollment

Major field of study and enrollment in school 1 year after the receipt of a degree are also somewhat related. Individuals who majored in biology, the social sciences, or psychology were more likely to be enrolled in school than the typical baccalaureate degree recipient (table 1). Of more interest, perhaps, than overall enrollment rates, is the relationship between enrollment status and employment status. Table 1 presents a measure of this relationship in the proportion of

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1 Employment status of the population from the Current Population Survey, U.S. Department of Labor, Bureau of Labor Statistics, April, 1985.

2 Average hourly and weekly earnings of employees on private, non-agricultural payrolls from the Current Employment Statistics Survey, U.S. Department of Labor, Bureau of Labor Statistics, April, 1985.

Table 1.--Labor force status, salaries, enrollment rates and job characteristics of 1983-84 baccalaureate degree recipients 1 year after graduation, by major field of study

Major	Employed						Percent unemployed	Percent enrolled	Percent not working, but enrolled in school
	Percent full-time	Percent part-time	Percent reporting job related to field of study	Percent reporting some career potential of job	Percent reporting degree not required for job	Average annual salary of full-time employed			
All majors	74	12	78	57	37	$ 18,300	3	23	57
Business and management	85	5	87	66	40	19,000	3	12	37
Education	73	18	84	61	26	15,300	2	23	34
Engineering	84	7	93	76	13	25,100	2	23	98
Health profession	74	16	96	74	34	21,100	3	17	46
Public affairs/ social services	75	11	70	53	48	14,900	6	21	49
Biological sciences	45	18	66	27	48	15,500	2	81	84
Math, computer science, physical sciences	76	11	86	62	22	21,700	3	27	61
Social sciences	62	15	52	40	46	16,500	4	35	76
Humanities	59	20	57	40	52	14,400	5	29	62
Psychology	57	19	57	37	48	15,500	5	34	58
Other	73	12	74	53	45	16,000	5	18	41

Table 2.--Rankings of average annual salaries, by major field of study

Major field	Average annual salary	Ranking*
Engineering	$ 25,100	1
Math, computer science, physical sciences	21,700	2
Health professions	21,100	2
Business and management	19,000	3
Social sciences	16,500	4
Biology	15,500	5
Psychology	15,500	5
Education	15,300	6
Public affairs/social services	14,900	6
Humanities	14,400	7

*Tied ranks indicate no significant differences in reported average annual salary.

recent college graduates who were not working (either unemployed, not working, or not looking for work) but who were enrolled in school 1 year after graduation. Of the 14 percent of all bachelor's degree recipients who were not working, more than half (57 percent) were enrolled in school. Graduates in major fields deviating significantly from this typical enrollment rate for non-working degree recipients are detailed in Table 3.

Table 3.--Enrollment rates of non-working bachelor's degree recipients, by selected major field of study

Major field	Proportion not working	Enrollment rate of non-working bachelor's degree recipients
All majors	14%	57%
Engineering	9	98*
Biology	37	84*
Social sciences	23	76*
Other majors	15	41**
Business and management	10	37**
Education	9	34**

* Significantly higher enrollment rates for non-working graduates than the national average.

** Significantly lower enrollment rates for non-working graduates than the national average.

The employment and enrollment status of graduates provides a good indication of the activities 1 year after completion. Equally important is the relationship of these activities to the major field of study pursued in college and the individual's perception of, and satisfaction with, his other current activities.

That is to say, simply obtaining a job is a necessary but not sufficient indicator of the value of a college degree. Rather, it is the job's relationship to that degree and the potential of the job in helping the graduate achieve his or her career goals that are truly significant.

Occupations, by Major Field of Study

To explore this relationship, the Recent College Graduates survey asked graduates about their field of employment, whether their job 1 year after graduation had any relationship to their field of study in college, whether they felt their job had career potential, and if they felt that a degree was required to obtain their current job. The following summary tables indicate, for each major field of undergraduate study, the major occupations of graduates - the type of jobs, the average reported salary of individuals in those jobs, the relatedness of the job to the major field of study, the graduates' perception of the career potential of the job, and the proportion who felt that a degree was not required to obtain their job.

Table 4.--Activities of 1983-1984 business and management graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
85	5	3	7	12	37

Table 5.--Major occupations of 1983-1984 business and management graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*			
	Business/manager	Sales person	Clerk	Laborer
	(Percent of Graduates)			
All graduates	58	21	4	4
Reporting job related to major	95	88	61	60
Reporting job had career potential	83	73	43	53
Reporting job required no degree	29	47	81	76
Average annual salary	$19,800	$18,900	$12,800	$20,700

*Occupation in which at least 3 percent of graduates employed.

Business and management majors tended to find jobs (90 percent were employed), and to find jobs that were related to their major field of study -- 58 percent found jobs in business and management and 21 percent found a job in sales. Graduates in both of these occupational areas overwhelmingly felt that their job was related to their major field, and high proportions of business and management graduates in these two occupations felt their jobs had at least some career potential, although only about half of those in sales positions felt that a degree was required for the job. On the other hand, only 12 percent of business and management majors continued on in school, and of the 10 percent that were not working, only about one third (37 percent) were enrolled in school.

Table 6.--Activities of 1983-1984 education graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
73	18	2	7	23	34

Table 7.--Major occupations of 1983-1984 education graduates by occupation and job characteristics: 1985

Job characteristics	Major occupation*				
	Educator	Business/ manager	Sales person	Clerk	Public affairs/ social workers
	(Percent of Graduates)				
All graduates	76	5	4	3	3
Reporting job related to major	98	45	22	26	60
Reporting job had career potential	77	58	27	33	78
Reporting job required no degree	8	64	89	83	46
Average annual salary	$14,100	$16,700	$13,400	$13,100	$15,900

*Occupation in which at least 3 percent of graduates employed.

Graduates in education tended to find jobs (91 percent were employed) and to find jobs in the field of education (78 percent) and, as might be expected, to feel that a degree was required for the job. Education graduates employed in education tended to feel that their job had career potential, although the few education graduates employed in the area of public affairs/social work also felt that their job had career potential. Dimming this picture of education majors in the job market is their average annual salary, which ranked among the lowest of all degree recipients. About a quarter of education graduates went on to school after graduation, and only about one-third of those not working were enrolled.

Table 8.--Activities of 1983-84 engineering graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
85	7	2	7	23	98

Table 9.--Major occupations of 1983-1984 engineering graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*			
	Engineer	Technician	Business/ manager	Laborer
	(Percent of Graduates)			
All graduates	70	9	7	3
Reporting job related to major	98	94	76	76
Reporting job had career potential	89	81	86	65
Reporting job required no degree	5	23	24	60
Average annual salary	$26,300	$21,600	$23,200	$22,200

*Occupation in which at least 3 percent of graduates employed.

Engineers were the highest paid of all recent college graduates, on the average, and this high rate of pay was fairly consistent across all occupational areas that engineering graduates tended to enter. Additionally, engineering graduates tended to be employed at high rates, and almost all (98 percent) of those who were not working were enrolled in school. Engineers also tended to be satisfied with their jobs, with most reporting their job had career potential, was related to their major, and required a college degree. In terms of going on to school, only 23 percent of all engineering graduates were enrolled 1 year after graduation.

Table 10.--Activities of 1983-84 health professions graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
74	16	3	7	17	46

Table 11.--Major occupations of 1983-1984 health professions graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*		
	Health professional	Technician	Business/manager
	(Percent of graduates)		
All graduates	74	12	5
Reporting job related to major	100	91	84
Reporting job had career potential	89	77	51
Reporting degree not required for job	34	21	35
Average annual salary	$21,500	$18,100	$22,500

*Occupation in which at least 3 percent of graduates employed.

Individuals who majored in the health professions tended to find employment in three areas, two of which -- health occupations and technicians -- are clearly related to the undergraduate major in the health professions. The third -- business -- was reported by graduates as being related to their field of study, although about a third of those employed in health occupations and business did not feel a degree was required. While health professions graduates in health occupations or working as technicians felt their job had career potential, those in a business and management occupation were less certain of the career potential of their job. In general, health professions majors did not tend to enroll in school following graduation (17 percent), but about half (46 percent) of those not working were enrolled.

Table 12.--Activities of 1983-84 public affairs/social services graduates: 1985

Employed		Unemployed		Enrolled	Not working, but enrolled in school
Full-time	Part-time	Looking for work	Not looking for work		
(Percent)					
74	16	3	7	17	46

Table 13.--Major occupations of 1983-1984 public affairs/social services graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*						
	Public affairs/ social worker	Business/ manager	Sales person	Clerk	Service person	Educator	Health professional
	(Percent of graduates)						
All graduates	36	17	12	10	6	6	4
Reporting work related to major	97	54	47	59	41	65	100
Reporting job had career potential	59	89	71	47	**	49	68
Reporting degree not required for job	35	46	79	62	77	3	
Average annual salary	$14,200	$19,100	$13,100	$14,100	$10,800	$18,500	$13,800

* Occupation in which at least 3 percent of graduates employed.

** Number in sample too small to yield a reliable estimate.

Of all the professional undergraduate majors (i.e., business and management, education, engineering, health professions, and public affairs/social services), individuals who majored in public affairs/social services seemed to enter more occupational fields, to enter fields that were unrelated to their field of study, and did not require a degree. Although a high proportion of these graduates were employed, their overall average salary was among the lowest of all graduates. Except for those who went into business and management occupations, sales, or health occupations, public affairs/social services graduates did not tend to feel their job, 1 year after graduation, had much career potential. Additionally, graduates in public affairs/social services did not tend to enroll in additional schooling after graduation, even though their occupational situation was not entirely satisfactory.

Table 14.--Activities of 1983-84 biological sciences graduates: 1985

Employed		Unemployed		Enrolled	Not working, but enrolled in school
Full-time	Part-time	Looking for work	Not looking for work		
(Percent)					
45	18	2	35	81	84

Table 15.--Major occupations of 1983-1984 biological sciences graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*								
	Technician	Laborer	Educator	Biological scientist	Service personnel	Business/ manager	Sales person	Clerk	Health professional
	(Percent of graduates)								
All graduates	40	11	11	9	8	7	6	4	4
Reporting job related to major	94	10	97	94	14	29	38	27	84
Reporting job had career potential	48	**	73	65	**	76	29	**	44
Reporting degree not required for job	37	99	15	12	91	43	71	87	56
Average annual salary	$14,700	$12,700	$15,000	$19,100	$13,400	$17,700	$12,800	$10,400	$23,400

* Occupation in which at least 3 percent of graduates employed.

** Number in sample too small to yield a reliable estimate.

Individuals who majored in the biological sciences in college tended to participate in the labor force at a lower rate (65 percent) than most undergraduate completers (89 percent). On the other hand, individuals who received a degree in the biological sciences tended to enroll in school in much higher proportions than the typical graduate (81 percent vs 23 percent). A high proportion of biological science majors who were not working were enrolled in school. Of those graduates who were employed, 40 percent were working as technicians -- a job related to their field of study, but with not much perceived career potential. Additionally, biological sciences completers tended to be employed in a variety of occupations ranging from professional occupations (education and the biological sciences) to laborers and service occupations. Average salaries of employed biological science graduates also tended to be on the low side, ranking fifth out of seven.

Table 16.--Activities of 1983-84 mathematics, computer sciences, and physical sciences graduates: 1985

Employed		Unemployed		Enrolled	Not working, but enrolled in school
Full-time	Part-time	Looking for work	Not looking for work		
(Percent)					
76	11	3	10	27	61

Table 17. -- Major occupations of 1983-1984 mathematics, computer science, physical science majors, by occupation and job characteristics: 1985

Job characteristics	Major occupation*					
	Technician	Computer specialist	Educator	Business/ manager	Engineer	Biological scientist
	(Percent of graduates)					
All graduates	44	19	9	8	7	5
Reporting job related to major	93	98	96	66	96	98
Reporting job had career potential	82	92	40	71	86	78
Reporting degree not required for job	16	13	7	21	7	17
Average annual salary	$21,500	$25,100	$ 14,600	$20,900	$25,400	$21,800

* Occupation in which at least 3 percent of graduates employed.

About 90 percent of completers in math, computer science, and physical sciences areas participated in the labor force 1 year after graduation. Of those that were employed, most were working in jobs that were perceived as related to their major field of study, required a degree, and had some career potential. It is interesting to note, however, that of those completers in math, computer science, or the physical sciences, who were employed in teaching, only 40 percent felt their job had some career potential. With respect to salary, graduates in the math and science areas had relatively high salaries on the average, ranking second only to engineering graduates. However, those that entered the teaching profession had significantly lower salaries than the average graduate in math, computer science, and the physical sciences.

Table 18.--Activities of 1983-84 social sciences graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
62	15	4	19	35	76

Table 19.--Major occupation of 1983-84 social sciences graduates, by occupation and job characteristics: 1985

	Major Occupation*							
Job characteristics	Business/ manager	Educator	Sales person	Public affairs/ social worker	Technician	Clerk	Service personnel	Communicator
	(Percent of graduates)							
All graduates	27	13	13	12	8	7	7	4
Reporting job related to major	60	78	33	71	67	34	18	24
Reporting job had career potential	72	55	61	60	53	19	12	63
Reporting degree not required for job	33	20	54	46	29	69	98	55
Average annual salary	$18,700	$13,200	$19,600	$16,300	$16,000	$14,500	$10,000	$13,800

* Occupation in which at least 3 percent of graduates employed.

The social sciences include such diverse fields as anthropology, criminology, economics, history, international relations, and sociology. Given the diversity of

this field of study, it is reasonable that individuals who majored in the social sciences would tend to enter many different occupational areas. The above table shows, however, four of the eight major occupations (employing 3 percent or more of graduates in the field) that social science graduates entered were felt to be unrelated to their major field of study, and, on the average, only 40 percent of social science graduates felt that their job had some career potential. On the other hand, social science graduates did tend to continue their schooling at a higher rate than the average degree recipient, and 76 percent of those who were not working were enrolled in school.

Table 20.--Activities of 1983-84 humanities graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
59	20	5	16	29	62

Table 21.--Major occupations of 1983-1984 humanities graduates, by occupation and job characteristics: 1985

Job characteristics	Major Occupation*								
	Fine artist	Business/ manager	Educator	Sales person	Clerk	Service personnel	Laborer	Technician	Public aff social wor
	(Percent of graduates)								
All graduates	17	15	14	13	11	7	7	5	5
Reporting job related to major	93	42	86	46	36	10	55	52	66
Reporting job had career potential	65	74	55	43	27	12	36	56	**
Reporting degree not required for job	38	42	12	69	74	100	88	48	38
Average annual salary	$13,800	$16,500	$13,400	$13,700	$12,900	$12,100	$13,700	$17,600	$12,600

* Occupation in which at least 3 percent of graduates employed.

** Number in sample too small to yield a reliable estimate.

Humanities graduates include individuals who majored in the fine and applied arts, English, foreign languages, philosophy, and theology, so again, it might be expected that graduates in this field of study would enter a variety of occupational areas. This is the case, since 5 percent or more of employed humanities graduates entered nine occupational areas. Of those nine major occupational areas employing humanities graduates, only two -- fine arts and education -- were perceived to be related to their undergraduate major by a large proportion of humanities graduates, and over half (52 percent) felt they did not need a degree to obtain their current job. As with social science graduates, only about 40 percent of humanities graduates felt their job had some career potential, and graduates in the humanities were the lowest paid of all undergraduate degree recipients. Given this dim employment situation, it might be expected that graduates in the humanities might enroll in additional education or training. This does not seem to be the case, however, since only 27 percent were enrolled -- a proportion not signficantly different from the typical undergraduate completers.

Table 22.--Activities of 1983-84 psychology graduates: 1985

Employed		Unemployed			
Full-time	Part-time	Looking for work	Not looking for work	Enrolled	Not working, but enrolled in school
(Percent)					
57	19	5	19	34	58

Table 23.--Major occupations of 1983-1984 psychology graduates, by occupation and job characteristics: 1985

Job characteristics	Major occupation*						
	Educator	Public affairs/ social worker	Business/ manager	Service personnel	Clerk	Technician	Sales person
	(Percent of graduates)						
All graduates	16	15	15	11	10	9	9
Reporting job related to major	90	96	74	39	37	41	42
Reporting job had career potential	62	69	70	18	34	38	43
Reporting degree not required for job	25	24	33	83	54	54	70
Average annual salary	$14,700	$13,400	$19,200	$12,100	$12,900	$17,600	$13,700

* Occupation in which at least 3 percent of graduates employed.

Psychology majors do not tend to be employed in large proportions in any single field. Rather, they seem to be fairly evenly distributed among several occupations -- professional and non-professional. On the average, the salary of psychology majors ranked fifth, being significantly higher than education, public affairs, and humanities majors. Only about 47 percent of psychology majors felt their job was related to their major field, but an overwhelming number of those in education and public affairs/social services occupations felt this way. About 37 percent of psychology majors felt their job 1 year after graduation, had some career potential, although more psychology graduates in professional occupations (education, public affairs/social services, and business) tended to perceive some career potential for their jobs than did those in non-professional fields. Surprisingly, only 34 percent of psychology majors were enrolled in school 1 year after graduation, and only 58 percent of those who were not working were enrolled, which did not differ from the average for all graduates (57 percent).

It is evident from these results that majoring in a professional field of study at the undergraduate level eases the transition from school to work for bachelor's degree recipients, and that a baccalaureate degree in a professional field tends to be a terminal degree -- at least in the short term. A bachelor's degree in arts and sciences fields such as biology, social science or psychology, however, is more likely to be a transitional degree in that a high proportion of completers in these fields tend to enroll in school almost immediately after receiving their undergraduate award, either because they feel the need for further schooling or because they had planned to enter graduate or first-professional school right after completing college. It must also be noted that except for occupations in which a degree is a recognized standard for admission (i.e., education and engineering), a surprisingly high proportion of degree recipients (37 percent) did not feel that a degree was necessary to obtain the job they held 1 year after graduation.

For Further Information

For more information about this survey, contact Roslyn Korb, Center for Education Statistics, Postsecondary Education Statistics Division, Special Surveys and Analysis Branch, Room 408, 555 New Jersey Avenue, NW., Washington, D.C. 20208, telephone (202) 357-6587. Information about the Center's statistical program and a catalog of publications may be obtained from the Education Information Branch, same address, Room 300, telephone (202) 357-6651 or 1-800-424-1616. Inquiries concerning data tapes on the 1985 Recent College Graduates survey should be directed to the Information Systems and Media Services Branch, same address, Room 306, telephone (202) 357-6522.

Appendix A

TECHNICAL NOTES

Description of Survey

The 1985 Recent College Graduate survey was conducted in June through September, 1985. Eighteen thousand bachelor's and master's degree recipients were selected in the second stage of a 2-stage sample selection procedure. The first stage sample was selected from all Education Department-recognized accredited institutions in the 50 States and the District of Columbia that award bachelor's or master's degrees, or both. Institutions were stratified on two dimensions -- emphasis on education (i.e., the proportion of all bachelor's degrees awarded in education was greater than 50 percent, or the number of bachelor's degrees in education was 100 or more) and institutional control (public and private). Within each stratum, institutions were selected with probability proportional to size, where size was defined as the total number of bachelor's and master's degrees awarded. Traditionally black institutions were oversampled by tripling their probability of selection. There were 404 institutions selected through this process.

Lists of individuals who received bachelor's or master's degrees between July 1, 1983 and June 30, 1984 were obtained from 97 percent of the sampled institutions. Graduates were stratified on the basis of level of degree (bachelor's or master's degree), field of major (education, math, computer science, physical science, letters, and all other fields), and Hispanic surname. Differential sampling rates were applied to graduates within each stratum. There were 16,000 bachelor's and 2,000 master's degree recipients sampled. The survey and follow-up procedures yielded an effective response rate of 78 percent.

A ratio estimation procedure was used to inflate the sample results to estimates applicable to the total number of bachelor's and master's degree recipients in 1983-84. The 1983-84 Higher Education General Information Survey (HEGIS) of Earned Degrees provided the applicable estimates for the total number of graduates in the various strata.

Reliability of the Estimates

The estimates in this report are subject to both sampling and non-sampling error. Sampling error arises because a small number of individuals are selected from a population and are used to make inferences to, and draw conclusions about, the population. Estimates derived from one sample would differ from estimates derived from another sample drawn from the same population in the same way. These differences are the result of sampling variability. One measure of sampling error is the coefficient of variation (CV). The CV is a measure of the percent of an estimate that is due to sampling variability. Table A presents the coefficient of variations for each of the estimates in table 1 of this report.[3] The CV can be used to determine the standard error of an estimate. For example, the proportion of recent college graduates who were employed full-time in 1985 was estimated to be 74 percent (table 1). The CV of this estimate is measured to be (0.006). This means that about 0.6 percent of the estimate, or 0.4 percent of the proportion, is a measure of the variation of this estimate among samples, and, in fact 0.4 percent is the standard error of the estimated proportion of full-time employed recent college graduates.

A standard error may be used to establish a confidence interval around an estimate. To establish the 95 percent confidence interval around the estimate of the proportion of full-time employed recent college graduates, multiply the standard error (0.004) by 1.96 equal to .008, and add and subtract this value to the estimate (.74 $\pm$ .008). When multiplied by the standard error of the estimate, 1.96 provides the limits of a 95 percent confidence interval. The resulting confidence interval (.73 - .75) would contain the "true" proportion of full-time employed in 95 percent of the samples that might be drawn from the population of recent baccalaureate degree recipients. All comparisons cited in this report are significant at the 95 percent or higher confidence level, and pair-wise t-tests are used to test for the statistical significance of observed differences.

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[3] Coefficients of variation for all other estimates presented in this report are available upon request.

Table A.--Coefficient of variation for estimates in table 1--labor force status, salaries, enrollment rates, and job characteristics of 1983-84 baccalaureate degree recipients 1 year after graduation, by major field of study.

Major	Percent Employed		Unemployed	Average annual salary of full-time employed	Enrolled in school	Percent not employed, but enrolled in school	Percent reporting job related to field of study study	Percent reporting some career potential of job	Percent reporting degree not required for job
	Full-time	Part-time							
All majors	0.6	2.9	6.0	0.6	3.6	2.6	0.7	1.0	1.9
Business and management	1.0	14.6	13.7	1.1	9.7	9.6	1.1	1.9	3.8
Education	1.9	7.0	19.7	1.3	4.3	8.3	1.4	2.2	6.2
Engineering	2.1	14.1	31.8	1.2	10.9	15.7	1.0	2.8	14.7
Health professions	2.3	11.3	37.0	1.1	15.3	18.2	1.1	2.9	8.7
Public affairs/ social services	7.8	24.9	30.0	2.6	23.6	23.9	7.6	6.1	9.2
Biological sciences	9.8	12.6	33.9	3.7	9.6	9.3	5.2	11.0	7.6
Math, computer science, physical science	4.3	8.3	16.8	1.7	4.9	9.9	0.9	3.0	5.9
Social sciences	3.2	6.7	16.7	2.0	8.4	8.9	4.5	4.3	5.7
Humanities	5.3	8.0	17.8	1.7	8.7	11.0	4.8	4.4	4.7
Psychology	6.9	14.4	26.3	3.1	12.8	15.9	9.3	8.0	8.2
Other	6.1	11.8	18.2	1.9	12.7	11.0	2.9	3.3	5.3

Appendix B

Definitions of Terms Used in This Report

1. Employment Status - Graduates were asked if they were employed for pay during the week of May 4, 1985. A response of "yes" indicated they were employed. The number of reported hours per week indicates full-time/part-time employment (over 30 hours for full-time; 30 hours or less for part-time). Unemployed indicates those who were not working, but were looking for work.

2. Job-related to major field of study - Graduates were asked if the work of their principal job was closely related or somewhat related, or not related to their degree.

3. Job has career potential - Graduates were asked to select the statement that best described their principal job. Responses of "job has either possible or definite career potential" were used.

4. Degree not required to obtain job - a response of "no" to the question: "Was a college degree required in order to acquire principal job?"

5. Major Field of Study - The HEGIS taxonomy of instructional programs was used to code student-reported major field of study. Each major field used in this report is an aggregate field composed of several specific programs. Table B presents the major field of study used, the specific programs that were included in the major field of study, and the HEGIS taxonomy codes for the specific programs.

6. Occupations were coded from written responses to the question of "what type of work do you do?" The 1980 Occupational Classification system of the U.S. Bureau of the Census was used. Table B lists the titles of specific occupations and their corresponding codes. Table C presents the occupational areas used in this report and the specific occupational codes that were used to classify graduates into an occupational area.

Table B.--Major field of study used in this report, specific programs included in each major field, and HEGIS classification codes

Major Field of Study	Specific Programs	HEGIS Code
Business and Management		0500
	Business and Commerce, General	0501
	Accounting	0502
	Business Statistics	0503
	Banking and Finance	0504
	Investments and Securities	0505
	Business Management and Administration	0506
	Operations Research	0507
	Hotel and Restaurant Management	0508
	Marketing and Purchasing	0509
	Transportation and Public Activities	0510
	Real Estate	0511
	Insurance	0512
	International Business	0513
	Secretarial Studies	0514
	Personnel Management	0515
	Labor and Industrial Relations	0516
	Business Economics	0517
	Other	0599
Education		0800
	Education, General	
	Education, by Level	0801-0807, 0823
	Special Education	0808-0820, 0899-2
	Social Foundations	0821
	Educational Psychology	0822
	Education Statistics and Research	0824
	Education Testing, Evaluation, and Measurement	0825
	Student Personnel	0826
	Education Administration	0827-0829
	Education, by Field	0830-0839, 0899-1, 0899-3, 3,0899-4

Table B.--Major field of study used in this report, specific programs included in each major field, and HEGIS classification codes (Continued)

Engineering	0900
Materials 0915	
Ceramics 0916	
Textiles 0917	
Mining and Minerals	0918
Engineering Physics	0919
Nuclear 0920	
Engineering Mechanics	0921
Environmental and Sanitation	0922
Naval Architecture and Marine	0923
Ocean 0924	
Engineering Technologies	0925
Other 0999	
Health Professions	1200
Health Professions, General	1201
Hospital & Health Care Administration	1202
Nursing 1203	
Dental & Medical Specialties	1205-1207
Occupational Therapy	1208
Physical Therapy	1212
Public Health	1214
Medical Record Librarianship	1215
Biomedical Communication	1217
Speech Pathology and Audiology	1220
Clinical Social Work	1222
Other 1299	
Public Affairs/ Social Services	2100
Community Services, General	2101
Public Administration	2102
Parks and Recreation Management	2103
Social Work and Helping Services	2104
Law Enforcement and Corrections	2105
International Public Service	2106
Other 2199	

Table B.--Major field of study used in this report, specific programs included in each major field, and HEGIS classification codes (Continued)

Biological Science	0400
Biology, General	0401
Botany	0402 0403
Plant Pathology, Pharmacology, Physiology	0404-0406
Zoology	0407
Pathology	0408
Pharmacology	0409
Physiology	0410
Microbiology	0411
Anatomy	0412
Histology	0413
Biochemistry	0414
Biophysics	0415
Molecular Biology	0416
All Biology	0417
Marine Biology	0418
Biometrics and Biostatistics	0419
Ecology 0420	
Entomology	0421
Genetics 0422	
Radiobiology	0423
Nutrition, Scientific	0424
Neurosciences	0425
Toxicology	0426
Embryology	0427
Other 0499	
Math, Computer Science	
Physical Science	
Math, General	1701
Statistics	1702
Applied Mathematics	1703
Other Math	1799
Physical Science, General	1901
Physics	1902-1904
Chemistry	1905-1910, 1912
Astronomy	1911
Atmosphere Science and Meteorology	1913
Geology	1914
Geochemistry	1915
Geophysics and Seismology	1916
Earth Sciences, General	1917
Paleontology	1918
Oceanography	1919
Metallurgy	1920
Other Physical Sciences	1999
Computer and Information Sciences	0701-0705, 0799

Table B.--Major field of study used in this report, specific programs included in each major field, and HEGIS classification codes (Continued)

Social Science	2200
Social Science, General	2201
Anthropology	2202
Archaeology	2203
Economics	2204
History	2205
Geography	2206
Political Science and Government	2207
Sociology	2208
Criminology	2209
International Relations	2210
Ethnic Studies	2211-2213
Urban Studies	2214
Demography	2215
Other	2299
Humanities	
English	1501-1508
Philosophy	1509
Religious Studies	1510
Foreign Languages	1100-1116, 1199
Fine and Applied Arts	1000-1011, 1099
Psychology	2000
Psychology, General	2001
Experimental	2002
Clinical	2003
Psychology for Counseling	2004
Social	2005
Psychometrics	2006
Statistics in Psychology	2007
Industrial	2008
Developmental	2009
Physiological	2010
Other	2099

Table B.--Major field of study used in this report, specific programs included in each major field, and HEGIS classification codes (Continued)

Other

Agriculture and Material Resources	0100-0117, 0199
Communications	0600-0605, 0699
Architecture	0200-0206, 0299
Area Studies	0300-0314, 0399
Home Economics	1300-1307, 1399
Library Science	1600-1601, 1699
Military Science	1800-1803, 1899
Interdisciplinary Studies	4900-4904, 4999

Table C.-Occupational codes included in each of the occupational areas used in this report

Occupational Title	Occupational Code
Business and Management	003-037
Education	113-159, 163
Engineering	044-059
Health Occupations	084-089, 095-106
Public Affairs/Social Services	174-177
Biological Sciences	078, 079, 083
Computer Specialists	064, 065
Communications	195-198
Fine Arts	183-194
Technicians	203-235
Clerical	303-389
Laborers	503-599, 613-699, 703-799, 803-889
Sales	243-285
Service	403-469

Table C.--Continued

Occupational Classification System

Equivalent numeric codes follow the alphabetic code. Either code may be used, depending on the processing method. Numbers in parentheses following the occupation categories are the 1977 Standard Occupational Classification code equivalents. The abbreviation "pt" means "part" and "n.e.c." means "not elsewhere classified."

Occupation code	Occupation category
	MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS
	Executive, Administrative, and Managerial Occupations
003	Legislators (112)
004	Chief executives and general administrators, public administration (111)
005	Administrators and officials, public administration (pt 113 and 119, except 1136)
006	Administrators, protective services (pt 113)
007	Financial managers (122)
008	Personnel and labor relations managers (123)
009	Purchasing managers (124)
013	Managers, marketing, advertising, and public relations (125)
014	Administrators, education and related fields (128)
015	Managers, medicine and health (131)
016	Managers, properties and real estate (1353)
017	Postmasters and mail superintendents (1344)
018	Funeral directors (pt 1359)
019	Managers and administrators, n.e.c. (1136, 121, 126, 127, 132-139, except 1344, 1353, pt 1359)
	Management related occupations
023	Accountants and auditors (1412)
024	Underwriters (pt 1419)
025	Other financial officers (pt 1419)
026	Management analysts (142)
027	Personnel, training, and labor relations specialists (143)
028	Purchasing agents and buyers, farm products (pt 144)
029	Buyers, wholesale and retail trade, except farm products (432)
033	Purchasing agents and buyers, n.e.c. (pt 144)
034	Business and promotion agents (145)
035	Construction inspectors (1171, 618)
036	Inspectors and compliance officers, exc. construction (1172, 147)
037	Management related occupations, n.e.c. (149)
	Professional Specialty Occupations
043	Architects (15)
	Engineers, surveyors and mapping scientists
044	Aerospace engineers (1622)
045	Metallurgical and materials engineers (1623)
046	Mining engineers (1624)
047	Petroleum engineers (1625)

Occupation code	Occupation category
	MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS—Con.
	Professional Specialty Occupations—Con.
	Engineers, surveyors and mapping scientists—Con.
048	Chemical engineers (1626)
049	Nuclear engineers (1627)
053	Civil engineers (1628)
054	Agricultural engineers (1632)
055	Electrical and electronic engineers (1633, 1636)
056	Industrial engineers (1634)
057	Mechanical engineers (1635)
058	Marine engineers and naval architects (1637)
059	Engineers, n.e.c. (1639)
063	Surveyors and mapping scientists (1642)
	Mathematical and computer scientists
064	Computer systems analysts and scientists (171)
065	Operations and systems researchers and analysts (172)
066	Actuaries (1732)
067	Statisticians (1733)
068	Mathematical scientists, n.e.c. (1739)
	Natural scientists
069	Physicists and astronomers (1842, 1843)
073	Chemists, except biochemists (1845)
074	Atmospheric and space scientists (1846)
075	Geologists and geodesists (1847)
076	Physical scientists, n.e.c. (1849)
077	Agricultural and food scientists (1853)
078	Biological and life scientists (1854, 1859)
079	Forestry and conservation scientists (1852)
083	Medical scientists (1855)
	Health diagnosing occupations
084	Physicians (261)
085	Dentists (262)
086	Veterinarians (27)
087	Optometrists (281)
088	Podiatrists (283)
089	Health diagnosing practitioners, n.e.c., (289)
	Health assessment and treating occupations
095	Registered nurses (29)
096	Pharmacists (301)
097	Dietitians (302)
	Therapists
098	Inhalation therapists (pt 303)
099	Occupational therapists (pt 303)
103	Physical therapists (pt 303)
104	Speech therapists (pt 303)
105	Therapists, n.e.c. (pt 303)

Table C.--Continued

Occupation code	Occupation category
	MANAGERIAL AND PROFESSIONAL SPECIALTY OCCUPATIONS–Con.
	Professional Specialty Occupations–Con.
	Health assessment and treating occupations–Con.
106	Physicians' assistants (304)
	Teachers, postsecondary
113	Earth, environmental, and marine science teachers (2212)
114	Biological science teachers (2213)
115	Chemistry teachers (2214)
116	Physics teachers (2215)
117	Natural science teachers, n.e.c. (2216)
118	Psychology teachers (2217)
119	Economics teachers (2218)
123	History teachers (2222)
124	Political science teachers (2223)
125	Sociology teachers (2224)
126	Social science teachers, n.e.c. (2225)
127	Engineering teachers (2226)
128	Mathematical science teachers (2227)
129	Computer science teachers (2228)
133	Medical science teachers (pt 2232)
134	Health specialties teachers (pt 2232)
135	Business, commerce, and marketing teachers (2233)
136	Agriculture and forestry teachers (2234)
137	Art, drama, and music teachers (2235)
138	Physical education teachers (2236)
139	Education teachers (2237)
143	English teachers (2238)
144	Foreign language teachers (2242)
145	Law teachers (2243)
146	Social work teachers (2244)
147	Theology teachers (2245)
148	Trade and industrial teachers (2246)
149	Home economics teachers (pt 2249)
153	Teachers, postsecondary, n.e.c. (pt 2249)
154	Postsecondary teachers, subject not specified
	Teachers, except postsecondary
155	Teachers, prekindergarten and kindergarten (231)
N (156)	Teachers, elementary school (232)
P (157)	Teachers, secondary school (233)
158	Teachers, special education (235)
159	Teachers, n.e.c. (234, 239)
163	Counselors, educational and vocational (24)
	Librarians, archivists, and curators
164	Librarians (251)
165	Archivists and curators (252)
	Social scientists and urban planners
166	Economists (1912)
167	Psychologists (1915)
168	Sociologists (1916)
169	Social scientists, n.e.c. (1913, 1914, 1919)
173	Urban planners (192)
	Social, recreation, and religious workers
174	Social workers (2032)
175	Recreation workers (2033)
176	Clergy (2042)
177	Religious workers, n.e.c. (2049)
	Lawyers and judges
178	Lawyers (211)
179	Judges (212)
	Writers, artists, entertainers, and athletes
183	Authors (pt 321)
184	Technical writers (pt 321)
185	Designers (322)
186	Musicians and composers (323)
187	Actors and directors (324)
188	Painters, sculptors, craft-artists, and artist printmakers (325, pt 7263)
189	Photographers (326)
193	Dancers (327)
194	Artists, performers, and related workers, n.e.c. (328, 329)
195	Editors and reporters (331)
197	Public relations specialists (332)
198	Announcers (333)
199	Athletes (34)
	TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS
	Technicians and Related Support Occupations
	Health technologists and technicians
203	Clinical laboratory technologists and technicians (362)
204	Dental hygienists (363)
205	Health record technologists and technicians (364)
206	Radiologic technicians (365)
207	Licensed practical nurses (366)
208	Health technologists and technicians, n.e.c. (369)
	Technologists and technicians, except health
	Engineering and related technologists and technicians
213	Electrical and electronic technicians (3711)
214	Industrial engineering technicians (3712)
215	Mechanical engineering technicians (3713)
216	Engineering technicians, n.e.c. (3719)
217	Drafting occupations (3721)
218	Surveying and mapping technicians (3722)
	Science technicians
223	Biological technicians (382)
224	Chemical technicians (3831)
225	Science technicians, n.e.c. (3832, 3833, 384, 389)

Table C.--Continued

Occupation code	Occupation category
	TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.
	Technicians and Related Support Occupations—Con.
	Technicians, except health, engineering, and science
226	Airplane pilots and navigators (645)
227	Air traffic controllers (391)
228	Broadcast equipment operators (392)
229	Computer programmers (3931, 3932)
233	Tool programmers, numerical control (3934)
234	Legal assistants (396)
235	Technicians, n.e.c. (399)
	Sales Occupations
243	Supervisors and proprietors, sales occupations (40, pt 4518)
	Sales occupations, business goods and services
253	Insurance sales occupations (4222)
254	Real estate sales occupations (4223)
255	Securities and financial services sales occupations (4224)
256	Advertising and related sales occupations (4253)
257	Sales occupations, other business services (4252)
258	Sales engineers (pt 16)
259	Sales representatives, mining, manufacturing, and wholesale (412, 413)
	Sales occupations, personal goods and services
263	Sales workers, motor vehicles and boats (4142, 4144)
264	Sales workers, apparel (pt 4146)
265	Sales workers, shoes (pt 4146)
266	Sales workers, furniture and home furnishings (4148)
267	Sales workers; radio, television, hi-fi, and appliances (4143, 4152)
268	Sales workers, hardware and building supplies (4153)
269	Sales workers, parts (4167)
274	Sales workers, other commodities (4145, 4147, 4154, 4156, 4159, pt 4162, 4169, 4259, 4665)
275	Sales counter clerks (pt 4162)
Q (276)	Cashiers (4683)
277	Street and door-to-door sales workers (4163)
278	News vendors (4165)
	Sales related occupations
283	Demonstrators, promoters and models, sales (435)
284	Auctioneers (pt 439)
285	Sales support occupations, n.e.c. (434, 436, pt 439)
	Administrative Support Occupations, Including Clerical
	Supervisors, administrative support occupations
303	Supervisors, general office (4511-4514, 4516, pt 4518, 4519, 4529, 4537)
304	Supervisors, computer equipment operators (4535)
305	Supervisors, financial records processing (4521, 4536)
306	Chief communications operators (4515)

Occupation code	Occupation category
	TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.
	Administrative Support Occupations, Including Clerical—Con.
	Supervisors, administrative support occupations—Con.
307	Supervisors; distribution, scheduling, and adjusting clerks (4522-4528)
	Computer equipment operators
308	Computer operators (4852)
309	Peripheral equipment operators (4853)
	Secretaries, stenographers, and typists
R (313)	Secretaries (4612)
314	Stenographers (4613)
315	Typists (4622)
	Information clerks
316	Interviewers (4642)
317	Hotel clerks (4643)
318	Transportation ticket and reservation agents (4644)
319	Receptionists (4645)
323	Information clerks, n.e.c. (4649)
	Records processing occupations, except financial
325	Classified-ad clerks (4662)
326	Correspondence clerks (4663)
327	Order clerks (4664)
328	Personnel clerks, except payroll and timekeeping (4692)
329	Library clerks (4694)
335	File clerks (4696)
336	Records clerks (4693, 4699)
	Financial records processing occupations
S (337)	Bookkeepers, accounting, and auditing clerks (4712)
338	Payroll and timekeeping clerks (4713)
339	Billing clerks (4715)
343	Cost and rate clerks (4716)
344	Billing, posting, and calculating machine operators (486)
	Duplicating, mail and other office machine operators
345	Duplicating machine operators (4872)
346	Mail preparing and paper handling machine operators (4873)
347	Office machine operators, n.e.c. (4879)
	Communications equipment operators
348	Telephone operators (4652)
349	Telegraphers (4623)
353	Communications equipment operators, n.e.c. (4659)
	Mail and message distributing occupations
354	Postal clerks, exc. mail carriers (4723)
355	Mail carriers, postal service (4733)
356	Mail clerks, exc. postal service (4722)
357	Messengers (4732)
	Material recording, scheduling, and distributing clerks, n.e.c.
359	Dispatchers (4741)
363	Production coordinators (4742)

Table C.--Continued

Occupation code	Occupation category
	TECHNICAL, SALES, AND ADMINISTRATIVE SUPPORT OCCUPATIONS—Con.
	Administrative Support Occupations, Including Clerical—Con.
	Material recording, scheduling, and distributing clerks, n.e.c.—Con.
364	Traffic, shipping, and receiving clerks (4743)
365	Stock and inventory clerks (4744)
366	Meter readers (4745)
368	Weighers, measurers, and checkers (4746)
369	Samplers (4747)
373	Expediters (4748)
374	Material recording, scheduling, and distributing clerks, n.e.c. (4749)
	Adjusters and investigators
375	Insurance adjusters, examiners, and investigators (4782)
376	Investigators and adjusters, except insurance (4783)
377	Eligibility clerks, social welfare (4784)
378	Bill and account collectors (4786)
	Miscellaneous administrative support occupations
379	General office clerks (4632)
383	Bank tellers (4682)
384	Proofreaders (4792)
385	Data-entry keyers (4624)
386	Statistical clerks (4717)
387	Teachers' aides (4695)
389	Administrative support occupations, n.e.c. (4787, 4799)
	SERVICE OCCUPATIONS
	Private Household Occupations
403	Launderers and ironers (533)
404	Cooks, private household (534)
405	Housekeepers and butlers (535)
406	Child care workers, private household (536)
T (407)	Private household cleaners and servants (532, 537, 539)
	Protective Service Occupations
	Supervisors, protective service occupations
413	Supervisors, firefighting and fire prevention occupations (5011)
414	Supervisors, police and detectives (5012)
415	Supervisors, guards (5013)
	Firefighting and fire prevention occupations
416	Fire inspection and fire prevention occupations (5112)
417	Firefighting occupations (5113)
	Police and detectives
418	Police and detectives, public service (5122)
423	Sheriffs, bailiffs, and other law enforcement officers (5124)
424	Correctional institution officers (5133)

Occupation code	Occupation category
	SERVICE OCCUPATIONS—Con.
	Protective Service Occupations—Con.
	Guards
425	Crossing guards (5132)
426	Guards and police, exc. public service (5134)
427	Protective service occupations, n.e.c. (5139)
	Service Occupations, Except Protective and Private Household
	Food preparation and service occupations
433	Supervisors, food preparation and service occupations (5021)
434	Bartenders (5212)
U (435)	Waiters and waitresses (5213)
436	Cooks, except short order (5214)
437	Short-order cooks (5215)
438	Food counter, fountain and related occupations (5216)
439	Kitchen workers, food preparation (5217)
443	Waiters'/waitresses' assistants (5218)
444	Miscellaneous food preparation occupations (5219)
	Health service occupations
445	Dental assistants (5232)
446	Health aides, except nursing (5233)
447	Nursing aides, orderlies, and attendants (5236)
	Cleaning and building service occupations, except private household
448	Supervisors, cleaning and building service workers (5024)
449	Maids and housemen (5242, 5249)
V (453)	Janitors and cleaners (5244)
454	Elevator operators (5245)
455	Pest control occupations (5246)
	Personal service occupations
456	Supervisors, personal service occupations (5025)
457	Barbers (5251)
458	Hairdressers and cosmetologists (5252)
459	Attendants, amusement and recreation facilities (5253)
463	Guides (5254)
464	Ushers (5255)
465	Public transportation attendants (5256)
466	Baggage porters and bellhops (5258)
467	Welfare service aides (5262)
468	Child care workers, except private household (5263)
469	Personal service occupations, n.e.c. (5257, 5269)
	FARMING, FORESTRY, AND FISHING OCCUPATIONS
	Farm operators and managers
W (473)	Farmers, except horticultural (5512-5514)
474	Horticultural specialty farmers (5515)
475	Managers, farms, except horticultural (5522-5524)
476	Managers, horticultural specialty farms (5525)

Table C.--Continued

Occupation code	Occupation category
	FARMING, FORESTRY, AND FISHING OCCUPATIONS—Con.
	Other agricultural and related occupations
	Farm occupations, except managerial
477	Supervisors, farm workers (5611)
479	Farm workers (5612-5617)
483	Marine life cultivation workers (5618)
484	Nursery workers (5619)
	Related agricultural occupations
485	Supervisors, related agricultural occupations (5621)
486	Groundskeepers and gardeners, except farm (5622)
487	Animal caretakers, except farm (5624)
488	Graders and sorters, agricultural products (5625)
489	Inspectors, agricultural products (5627)
	Forestry and logging occupations
494	Supervisors, forestry and logging workers (571)
495	Forestry workers, except logging (572)
496	Timber cutting and logging occupations (573, 579)
	Fishers, hunters, and trappers
497	Captains and other officers, fishing vessels (582)
498	Fishers (583)
499	Hunters and trappers (584)
	PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS
	Mechanics and repairers
503	Supervisors, mechanics and repairers (66)
	Mechanics and repairers, except supervisors
	Vehicle and mobile equipment mechanics and repairers
X (505)	Automobile mechanics (6711)
506	Automobile mechanic apprentices (pt 6711)
507	Bus, truck, and stationary engine mechanics (6712)
508	Aircraft engine mechanics (6713)
509	Small engine repairers (6714)
514	Automobile body and related repairers (6715)
515	Aircraft mechanics, exc. engine (6716)
516	Heavy equipment mechanics (6717)
517	Farm equipment mechanics (6718)
518	Industrial machinery repairers (673)
519	Machinery maintenance occupations (674)
	Electrical and electronic equipment repairers
523	Electronic repairers, communications and industrial equipment (6751, 6753, 6755)
525	Data processing equipment repairers (6754)
526	Household appliance and power tool repairers (6756)
527	Telephone line installers and repairers (6757)
529	Telephone installers and repairers (6758)
533	Miscellaneous electrical and electronic equipment repairers (6752, 6759)
534	Heating, air conditioning, and refrigeration mechanics (676)

Occupation code	Occupation category
	PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS—Con.
	Mechanics and repairers—Con.
	Mechanics and repairers, except supervisors—Con.
	Miscellaneous mechanics and repairers
535	Camera, watch, and musical instrument repairers (6771, 6772)
536	Locksmiths and safe repairers (6773)
538	Office machine repairers (6774)
539	Mechanical controls and valve repairers (6775)
543	Elevator installers and repairers (6776)
544	Millwrights (6778)
547	Specified mechanics and repairers, n.e.c. (6777, 6779)
549	Not specified mechanics and repairers
	Construction trades
	Supervisors, construction occupations
553	Supervisors; brickmasons, stonemasons, and tile setters (6012)
554	Supervisors, carpenters and related workers (6013)
555	Supervisors, electricians and power transmission installers (6014)
556	Supervisors; painters, paperhangers, and plasterers (6015)
557	Supervisors; plumbers, pipefitters, and steamfitters (6016)
558	Supervisors, n.e.c. (6011, 6018)
	Construction trades, except supervisors
563	Brickmasons and stonemasons (6112, 6113)
564	Brickmason and stonemason apprentices (pt 6112-6113)
565	Tile setters, hard and soft (6114, pt 6162)
566	Carpet installers (pt 6162)
Y (567)	Carpenters (6122)
569	Carpenter apprentices (pt 6122)
573	Drywall installers (6124)
575	Electricians (6132)
576	Electrician apprentices (pt 6132)
577	Electrical power installers and repairers (6133)
579	Painters, construction and maintenance (6142)
583	Paperhangers (6143)
584	Plasterers (6144)
585	Plumbers, pipefitters, and steamfitters (6150)
587	Plumber, pipefitter, and steamfitter apprentices (pt 6150)
588	Concrete and terrazzo finishers (6163)
589	Glaziers (6164)
593	Insulation workers (6165)
594	Paving, surfacing, and tamping equipment operators (6166)
595	Roofers (6168)
596	Sheetmetal duct installers (6172)
597	Structural metal workers (6173)
598	Drillers, earth (6174)

Table C.--Continued

Occupation code	Occupation category
	PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS--Con.
	Construction trades--Con.
	Construction trades, except supervisors--Con.
599	Construction trades, n.e.c. (6167, 6175, 6176, 6179)
	Extractive occupations
613	Supervisors, extractive occupations (602)
614	Drillers, oil well (622)
615	Explosives workers (623)
616	Mining machine operators (624)
617	Mining occupations, n.e.c. (626)
	Precision production occupations
633	Supervisors, production occupations (pt 711, 712)
	Precision metal working occupations
634	Tool and die makers (7211)
635	Tool and die maker apprentices (pt 7211)
636	Precision assemblers, metal (7212)
637	Machinists (7213)
639	Machinist apprentices (pt 7213)
643	Boilermakers (7214)
644	Precision grinders, fitters, and tool sharpeners (7216)
645	Patternmakers and model makers, metal (7217)
646	Lay-out workers (7221)
647	Precious stones and metals workers (jewelers) (7222, 7266)
649	Engravers, metal (7223)
653	Sheet metal workers (7224)
654	Sheet metal worker apprentices (pt 7224)
655	Miscellaneous precision metal workers (7229)
	Precision woodworking occupations
656	Patternmakers and model makers, wood (7231)
657	Cabinet makers and bench carpenters (7232)
658	Furniture and wood finishers (pt 7234, pt 7756)
659	Miscellaneous precision woodworkers (pt 7234, 7239)
	Precision textile, apparel, and furnishings machine workers
666	Dressmakers (7251, pt 7752)
667	Tailors (7252)
668	Upholsterers (7253)
669	Shoe repairers (7254)
673	Apparel and fabric patternmakers (pt 7259)
674	Miscellaneous precision apparel and fabric workers (pt 7259, pt 7752)
	Precision workers, assorted materials
675	Hand molders and shapers, except jewelers (7261)
676	Patternmakers, lay-out workers, and cutters (7262)
677	Optical goods workers (7264, pt 7677)
678	Dental laboratory and medical appliance technicians (7265)
679	Bookbinders (pt 7249, pt 7449)
683	Electrical and electronic equipment assemblers (7267)

Occupation code	Occupation category
	PRECISION PRODUCTION, CRAFT, AND REPAIR OCCUPATIONS--Con.
	Precision production occupations--Con.
	Precision workers, assorted materials--Con.
684	Miscellaneous precision workers, n.e.c. (7269)
	Precision food production occupations
686	Butchers and meat cutters (7271)
687	Bakers (7272)
688	Food batchmakers (7273, 7279)
	Precision inspectors, testers, and related workers
689	Inspectors, testers, and graders (7281)
693	Adjusters and calibrators (7282)
	Plant and system operators
694	Water and sewage treatment plant operators (791)
695	Power plant operators (pt 793)
696	Stationary engineers (pt 793, 7668)
699	Miscellaneous plant and system operators (792, 794, 795, 796)
	OPERATORS, FABRICATORS, AND LABORERS
	Machine Operators, Assemblers, and Inspectors
	Machine operators and tenders, except precision
	Metalworking and plastic working machine operators
703	Lathe and turning machine set-up operators (7312)
704	Lathe and turning machine operators (7512)
705	Milling and planing machine operators (7313, 7513)
706	Punching and stamping press machine operators (7314, 7317, 7514, 7517)
707	Rolling machine operators (7316, 7516)
708	Drilling and boring machine operators (7318, 7518)
709	Grinding, abrading, buffing, and polishing machine operators (7322, 7324, 7522)
713	Forging machine operators (7319, 7519)
714	Numerical control machine operators (7326)
715	Miscellaneous metal, plastic, stone, and glass working machine operators (7329, 7529)
717	Fabricating machine operators, n.e.c. (7339, 7539)
	Metal and plastic processing machine operators
719	Molding and casting machine operators (7315, 7342, 7515, 7542)
723	Metal plating machine operators (7343, 7543)
724	Heat treating equipment operators (7344, 7544)
725	Miscellaneous metal and plastic processing machine operators (7349, 7549)
	Woodworking machine operators
726	Wood lathe, routing, and planing machine operators (7431, 7432, 7631, 7632)
727	Sawing machine operators (7433, 7633)
728	Shaping and joining machine operators (7435, 7635)

Table C.--Continued

Occupation code	Occupation category
	OPERATORS, FABRICATORS, AND LABORERS—Con.
	Machine Operators, Assemblers, and Inspectors—Con.
	Machine operators and tenders, except precision—Con.
	Woodworking machine operators—Con.
729	Nailing and tacking machine operators (7636)
733	Miscellaneous woodworking machine operators (7434, 7439, 7634, 7639)
	Printing machine operators
734	Printing machine operators (7443, 7643)
735	Photoengravers and lithographers (7242, 7444, 7644)
736	Typesetters and compositors (7241, 7442, 7642)
737	Miscellaneous printing machine operators (pt 7249, pt 7449, 7649)
	Textile, apparel, and furnishings machine operators
738	Winding and twisting machine operators (7451, 7651)
739	Knitting, looping, taping, and weaving machine operators (7452, 7652)
743	Textile cutting machine operators (7654)
744	Textile sewing machine operators (7655, pt 7656)
745	Shoe machine operators (pt 7656, pt 7659)
747	Pressing machine operators (7657)
748	Laundering and dry cleaning machine operators (7255, 7658)
749	Miscellaneous textile machine operators (7453, 7653, pt 7659)
	Machine operators, assorted materials
753	Cementing and gluing machine operators (7661)
754	Packaging and filling machine operators (7462, 7662)
755	Extruding and forming machine operators (7463, 7663)
756	Mixing and blending machine operators (7664)
757	Separating, filtering, and clarifying machine operators (7476, 7666, 7676)
758	Compressing and compacting machine operators (7467, 7667)
759	Painting and paint spraying machine operators (7669)
763	Roasting and baking machine operators, food (7472, 7672)
764	Washing, cleaning, and pickling machine operators (7673)
765	Folding machine operators (7474, 7674)
766	Furnace, kiln, and oven operators, exc. food (7668, 7671, 7675)
768	Crushing and grinding machine operators (7477, pt 7677)
769	Slicing and cutting machine operators (7478, 7678)
773	Motion picture projectionists (pt 7679)
774	Photographic process machine operators (pt 7263, pt 7679)

Occupation code	Occupation category
	OPERATORS, FABRICATORS, AND LABORERS—Con.
	Machine operators, Assemblers, and Inspectors—Con.
	Machine operators and tenders, except precision—Con.
	Machine operators, assorted materials—Con.
777	Miscellaneous machine operators, n.e.c. (7479, 7665, pt 7679)
779	Machine operators, not specified
	Fabricators, assemblers, and hand working occupations
783	Welders and cutters (7332, 7532, 7714)
784	Solderers and brazers (7333, 7533, 7717)
785	Assemblers (772, 774)
786	Hand cutting and trimming occupations (7753)
787	Hand molding, casting, and forming occupations (7754, 7755)
789	Hand painting, coating, and decorating occupations (pt 7756)
793	Hand engraving and printing occupations (7757)
794	Hand grinding and polishing occupations (7758)
795	Miscellaneous hand working occupations (7759)
	Production inspectors, testers, samplers, and weighers
796	Production inspectors, checkers, and examiners (782, 786, 787)
797	Production testers (783)
798	Production samplers and weighers (784)
799	Graders and sorters, except agricultural (785)
	Transportation and Material Moving Occupations
	Motor vehicle operators
803	Supervisors, motor vehicle operators (6311)
Z (804)	Truck drivers, heavy (6412, 6413)
805	Truck drivers, light (6414)
806	Driver-sales workers (433)
808	Bus drivers (6415)
809	Taxi cab drivers and chauffeurs (6416)
813	Parking lot attendants (6417)
814	Motor transportation occupations, n.e.c. (6419)
	Transportation occupations, except motor vehicles
	Rail transportation occupations
823	Railroad conductors and yardmasters (6313)
824	Locomotive operating occupations (6432)
825	Railroad brake, signal, and switch operators (6433)
826	Rail vehicle operators, n.e.c. (6439)
	Water transportation occupations
828	Ship captains and mates, except fishing boats (6441, 6442)
829	Sailors and deckhands (6443)
833	Marine engineers (6444)
834	Bridge, lock, and lighthouse tenders (6445)
	Material moving equipment operators
843	Supervisors, material moving equipment operators (632)
844	Operating engineers (6512)

Table C.--Continued

Occupation code	Occupation category
	OPERATORS, FABRICATORS, AND LABORERS—Con.
	Transportation and Material Moving Occupations—Con.
	Material moving equipment operators—Con.
845	Longshore equipment operators (6513)
848	Hoist and winch operators (6514)
849	Crane and tower operators (6515)
853	Excavating and loading machine operators (6516)
855	Grader, dozer, and scraper operators (6517)
856	Industrial truck and tractor equipment operators (6518)
859	Miscellaneous material moving equipment operators (6519, pt 659)
	Handlers, Equipment Cleaners, Helpers, and Laborers
863	Supervisors; handlers, equipment cleaners, and laborers, n.e.c. (pt 711)
864	Helpers, mechanics and repairers (679)
	Helpers, construction and extractive occupations
865	Helpers, construction trades (6191-6195, 6198)
866	Helpers, surveyor (6196)
867	Helpers, extractive occupations (629)

Occupation code	Occupation category
	OPERATORS, FABRICATORS, AND LABORERS—Con.
	Handlers, Equipment Cleaners, Helpers, and Laborers—Con.
869	Construction laborers (81)
873	Production helpers (769, 779)
	Freight, stock, and material movers, hand
875	Garbage collectors (822)
876	Stevedores (823)
877	Stock handlers and baggers (824)
878	Machine feeders and offbearers (825)
883	Freight, stock, and material movers, hand, n.e.c. (649, 826)
885	Garage and service station related occupations (672)
887	Vehicle washers and equipment cleaners (83)
888	Hand packers and packagers (841)
889	Laborers, except construction (842, 846, pt 659)
999	**OCCUPATION NOT REPORTED**[1]

[1] Code used when not-reported cases are not allocated.

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